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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/694,842	10/29/2003	Joung-Hyun Yeo	Q77421	2497

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SUGHRUE MION, PLLC  
2100 PENNSYLVANIA AVENUE, N.W.  
SUITE 800  
WASHINGTON, DC 20037

EXAMINER
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NGUYEN, JIMMY H

ART UNIT	PAPER NUMBER
2629	

DATE MAILED: 06/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/694,842	<b>Applicant(s)</b> YEO, JOUNG-HYUN	
	<b>Examiner</b> Jimmy H. Nguyen	<b>Art Unit</b> 2629	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 29 October 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. This Office Action is made in response to applicant's papers filed on 10/29/2003. Claims 1-16 are currently pending in the application. An action follows below:

#### *Claim Objections*

2. Claim 2 is objected to because of the following informalities: "inputting" in line 6 must be changed to --outputting-- so as to make this claim consistent with the specification (see page 15, lines 6-8 and claim 12). Appropriate correction is required.

3. Claim 5 is objected to because of the following informalities: "second" in line 6 must be changed to --first-- so as to make this feature consistent with the feature recited in lines 3-4 of claim 4. Appropriate correction is required.

#### *Claim Rejections - 35 USC § 112*

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 1-16 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

As to claims 1-10 and 15, these claims contain the feature, "a plasma display panel drive unit converting the digitized image signal produced by an analog-digital converter into scanning pulses and data pulses for driving the plasma display panel" (see lines 5-9 of independent claim 1), which was not described in the specification in such a way as to enable

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one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The original disclosure, when filed, specifically Fig. 6 and the corresponding specification, page 13, lines 4-5, expressly teaches a plasma display panel drive unit 400 converting **the digitized image signal produced by the scaler 300** (not by the analog-digital converter 200 as claimed) into scanning pulses and data pulses for driving the plasma display panel. Therefore, it is not sure that the plasma display apparatus without the scaler, as being defined by claim 1, is capable of display an image having a screen size appropriate to the plasma display panel 450. Accordingly, these claims contain the above underlined feature which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

As to claims 11-14 and 16, these claims contain the feature, “**digitizing an image signal and outputting a digitized image signal; and adjusting an output gain of the digitized image signal in response to a variation of the discharge sustain voltage**” (see last 3 lines of independent claim 11), which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The original disclosure, when filed, specifically Fig. 6 and the corresponding specification, page 12, last 3 lines, expressly teaches the analog-digital converter 200 inputted with the image signal and converting it into a digital image signal (i.e., **digitizing** the image signal). Next, the specification, page 16, lines 3-7, expressly teaches the analog-digital converter reducing the amplitudes of the converted digital image signal by the gain data (i.e., **adjusting** an output gain of the digitized image signal) **and outputting** the adjusted digital image signal to the scaler 300. In other words, the method for controlling a power of a plasma display apparatus

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must be executed by the order of digitizing an image signal; adjusting an output gain of the digitized image signal in response to a variation of the discharge sustain voltage; and outputting an adjusted digitized image signal, and can't be executed by any arbitrary order such as steps of independent claim 11. Accordingly, these claims contain the above underlined feature which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

6. It is noted Applicants that in order to further consider the pending claims the following art rejections are based as best understood by the Examiner due to the rejection under 35 USC 112, first paragraph above.

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1, 11 and 13 are rejected under 35 U.S.C. 102(e) as being anticipated by Toda et al. (US 6,650,307 B1), hereinafter Toda.

As per claims 1 and 11, the claimed invention reads on the Toda reference as follows:  
Akiyama discloses a plasma display apparatus with low power consumption and high speed response (see Fig. 8 and Abstract) comprising a plasma display panel (1) driven by a discharge sustain voltage in the form of pulses (best seen Fig. 2); an analog-digital converter (a circuit

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comprising an A/D converter for receiving an analog image signal (see col. 1, lines 45-51) and a gain control circuit 21 (see Fig. 8)) digitizing an image signal and producing a digitized image signal; a plasma display panel drive unit (an unit comprising at least elements 2-4, 12 and 13, see Fig. 8) converting the digitized image signal into scanning pulses and data pulses for driving the plasma display panel and outputting the scanning and data pulses to the plasma display panel; a power supply unit (a portion of a power source 5 for generating signals provided to drivers 2 and 3 as shown in Fig. 8) supplying the discharge sustain voltage to the plasma display panel drive unit; and a controlling unit (a unit comprising elements 22, 23 and a portion of a power source 5 which detects and determined the voltage and current values, see Fig. 8 and col. 6, lines 3-11) adjusting an output gain of the analog-digital converter in response to a variation of the discharge sustain voltage of the power supply unit (see col. 2, lines 47-54, col. 3, lines 22-44, and col. 6, lines 3-11). Accordingly, the elements and steps in these claims are read in the reference.

As to claim 13, Toda expressly teaches that when a luminance level of the digitized image signal increases, the power consumption and the gain of the input image signal are reduced (see col. 7, lines 8-15), thereby reducing the discharge sustain voltage.

### ***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Toda.

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As per claim 14, as discussed in the rejection to claim 11 above, Toda discloses all the claimed limitations of this claim except that Toda does not expressly teaches a step of converting the digitized image signal to an image size appropriate to the plasma display panel. However, Official Notice is taken that both the concept and the advantages of providing a scaler in the plasma display apparatus, for converting the digitized image signal to an image size appropriate to the plasma display panel, are well-known and expected in the art. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to provide the scaler in the plasma display apparatus of Toda, because this would allow the display apparatus to receive an input image signal having any size and to display it on the display panel.

As per claims 15 and 16, as discussed in the rejection to claim 11 above, Toda discloses all the claimed limitations of this claim except that Toda does not expressly teaches a decoder unit receiving an externally inputted image signal, converting it into the image signal and outputting the image signal, and outputting the image signal to the analog-digital converter for digitizing, as presently claimed. However, Official Notice is taken that both the concept and the advantages of providing a decoder unit in the plasma display apparatus, for receiving an externally inputted image signal, converting it into the image signal and outputting the image signal, and outputting the image signal to the analog-digital converter for digitizing, are well-known and expected in the art. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to provide the decoder unit in the plasma display apparatus of Toda, because this would allow the display apparatus to receive a plurality of externally inputted image signals from a plurality of image sources, thereby allowing a user to view a desired image on the display.

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*Conclusion*


11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jimmy H. Nguyen whose telephone number is 571-272-7675.

The examiner can normally be reached on Monday - Thursday, 8:00 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached at 571-272-7681. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JHN  
May 30, 2006



Jimmy H. Nguyen  
Primary Examiner  
Technology Division: 2629